



Standard Operating Procedure (SOP): Tree Planting and Restoration

Purpose:

To provide the Departments of Parks & Recreation and Public Works staff with clear procedures for tree planting as directed by Ordinance 25-4, Tree Preservation.

Scope:

This SOP applies to all city-sponsored construction projects per Ordinance 25-4.

Related Documents:

- Tree Preservation Ordinance 25-4
- Parks & Recreation-Forestry—Citywide Tree Planting Specifications (latest version)
- Parks & Recreation-Forestry—Boulevard Tree Planting Guidelines
- Parks & Recreation-Forestry—Recommended Boulevard Species List (latest version)
- ANSI A300—Planting and Transplanting
- ISA Best Management Practices—Tree Planting (latest version)
- Public Works—Governing Specifications (latest version)
- Public Works—Standard Plate 6000C, Tree Planting

This SOP is organized according to project phase including:

- Design/Planning Phase
- Pre-Construction Phase
- Construction Phase
- Boulevard Restoration/Tree Planting Phase
- Establishment Phase

Design/Planning Phase

Minimum Standards:

It is important to note that minimum standards are not optimal for tree establishment and long term health, but rather the minimum design required to plant trees. Among the goals



of each project should be to provide the largest planting space and soil volumes possible to achieve maximum canopy coverage.

The Project Manager will work with Parks Forestry to ensure minimum standards for tree planting locations are met during the design/planning phase, including:

- Planting beds shall have a minimum width of five (5) feet from back of curb.
- The soil type, organic or structural, will be specified during the design process and approved by Forestry.
- For non-grass boulevards the following soil volumes will be required in order for trees to be planted:

Infrastructure	Planting Bed	Organic Soils	Structural Soils
Designed/New	Single Tree Bed	800 cu feet	1200 cu feet
	Multiple Tree Bed	600 cu feet	900 cu feet
Existing	Single Tree Bed	500 cu feet	750 cu feet
	Multiple Tree Bed	300 cu feet	450 cu feet

Minimum Standards Unfulfilled:

If the above minimum requirements cannot be met due to above or below ground conflicts, tree planting may not be advised. If trees cannot be planted to meet the 1:1 ratio for replacement, Forestry will determine suitable locations near the project area to be planted using project funds.

Preparation of Contract Specifications:

The Project Manager will ensure that all bid materials, contract specifications, and plan documents are consistent with the language in Ordinance 25-4, accompanying Standard Operation Procedures, and include or reference the *Citywide Tree Planting Specifications*.

Design Considerations:

- The Project Manager and Parks Forestry will work collaboratively to determine the most suitable hardscape surround for tree openings (grates, pavers, etc.).
- Plans should be developed utilizing the *Boulevard Tree Planting Guidelines* to maximize space available for tree planting.



- Trees are a central part of a thoughtful design, thus considerations such as snow storage, rain garden locations, and any other amenities to be placed within boulevards should be accounted for early in the design process so that planting spaces remain.

Planting via Project:

During the design phase of the project, Parks Forestry may approve planting to be completed via the project rather than by Parks Forestry master contract. Under these circumstances:

- The Project Manager will ensure all contractors or consultants have and adhere to the following documents:
 - Department of Parks & Recreation *Citywide Tree Planting Specifications* (latest edition)
 - Department of Parks & Recreation *Boulevard Tree Planting Guidelines*
 - Tree Planting Standard Plate
 - Minimum requirements for soils/boulevards as specified above
- The Project Manager and Parks Forestry will work collaboratively to determine species selection utilizing the most updated version of the *Recommended Boulevard Species List*, while factoring in overall diversity goals, location constraints (narrow boulevards, etc.), species attributes and survivability.
- Final determination/approval on species selection by Parks Forestry.
- Planting locations included on landscape plans shall follow the *Boulevard Tree Planting Guidelines* referenced above
 - Landscape plans indicating planting locations shall be considered as the best estimation of location, with final location to be marked and verified in the field by Parks Forestry.

Planting via Parks Forestry Master Contract

Upon request, Parks Forestry will provide a list of potential tree species to be planted in the project area for any outreach materials that are created for the project.

Pre Construction Phase

The Project Manager will ensure that the awarded contractor has and adheres to the



following documents:

- Department of Parks & Recreation *Citywide Tree Planting Specifications* (latest edition)
- Department of Parks & Recreation *Boulevard Tree Planting Guidelines*
- Tree Planting Standard Plate
- Minimum standards for soils/boulevards as specified in the Design/Planning Phase section

Streetscape Infrastructure:

The Project Manager will work with Parks Forestry to identify any existing tree planting related infrastructure, evaluate its' condition and potential for reuse. If materials are to be saved for future use, the Project Manager will work with the Contractor to deliver those materials to the Forestry Facility. Should materials be in poor condition and are determined to be refuse, the Project Manager will work with the Contractor to dispose of those materials.

Construction Phase

Planting Bed Soil Installation:

The Project Manager will provide Parks Forestry with advance notification of at least three (3) business days regarding the installation of planting bed soils.

- Soils shall be installed according to construction plan design details.
- Substitutions for alternative methods of installation shall be at the discretion of Parks Forestry.

Planting via Project:

If trees are planned to be planted via the project rather than through the established Parks Forestry Master Contract, the following additional procedures shall apply.

- **Tree Stock Procurement:** The Project Manager will ensure the Contractor is adhering to the Department of Parks & Recreation Citywide Tree Planting Specifications (latest edition) for procurement of tree stock.
 - Requests for species substitutions must be made to Parks Forestry in writing in advance of the applicable tree planting season.
- **Approved Tree Planting Seasons:** The Project Manager will ensure the Contractor is planning for planting during the approved timeframes per the *Citywide Tree*



Planting Specifications. Tree planting outside of the approved seasons needs prior approval of Parks Forestry.

- Spring Planting Season: April 7 - June 15
- Fall Planting Season: October 1 - November 15
- **Advance Notification of Planting Timeline:** To the best of their ability, the Project Manager shall share projected timelines with Parks Forestry regarding the boulevard restoration and tree planting phase of the project.

Planting via Parks Forestry Master Contract:

- **Tree Order Submission:** Parks Forestry orders tree stock for the spring and fall planting seasons through the Master Contract 2-3 months prior to the planting season. The Project Manager and Parks Forestry will communicate during the Construction Phase regarding estimated timelines for the transition from the Construction Phase to the Boulevard Restoration/Tree Planting Phase so that trees can be ordered based on the timelines provided in the chart below.

Tree Planting Season	Intent to Plant Notification Deadline – Public Works	Tree Order Placed Deadline - Forestry
Spring	November 30	January 15
Fall	June 30	August 15

- **Planting Plan Development:** Parks Forestry will work to identify planting sites, species and quantities for the seasonal tree order during the timeframe between November 30 and January 15 for spring planting and June 30 and August 15 for fall planting. Final quantities and planting locations are subject to change based on above and below ground conflicts.



Boulevard Restoration/Tree Planting Phase

Planting via Project

The Project Manager will work with the Contractor and Parks Forestry to coordinate tree planting.

Utility Locates & Verification Process

- The Project Manager will email Parks Forestry with the intent of entering GSOC tickets ten (10) business days prior to entry.
- Parks Forestry will mark curbs with white paint noting the initial planting location utilizing landscape plans and the *Boulevard Tree Planting Guidelines*.
- Upon completion of the initial marking, Parks Forestry will notify the Project Manager and Contractor.
- The Contractor will enter GSOC tickets and will notify Parks Forestry once they are fully cleared.
- Forestry will mark final planting locations within three (3) business days of utility clearance.
- Forestry will notify the Contractor and Project Manager that final planting locations have been marked and will provide a list of any changes made based on site conflicts.

Planting & Inspections

- The Project Manager or Contractor will notify Parks Forestry of the Contractor's planting start date at least three (3) business days in advance of planting.
- Parks Forestry may inspect tree stock prior to or during installation and reserves the right to reject any stock that does not meet specifications.
- The Project Manager or Contractor will notify Parks Forestry once planting has been completed.
- Parks Forestry will inspect trees following planting within fifteen (15) business days of installation per the *Citywide Tree Planting Specifications*. Any trees or planting methods that do not meet specifications will be added to a punch list for any additional work needed.



Punch List

All punch list items, including tree replacement as deemed necessary by Parks Forestry must be completed at no additional cost to the city by July 1st of that year for the Spring Planting Season and by December 1st of that year for the Fall Planting Season.

Upon completion of all work included on the Punch List, the Project Manager or Contractor will notify Parks Forestry of such completion and an inspection by Parks Forestry will be made to ensure compliance. Once punch list items have been inspected by Parks Forestry and have been found to meet the planting specifications, the tree will receive a satisfactory initial inspection.

Guarantee Period

All trees planted by the Contractor shall be guaranteed by the Contractor to be in good, healthy, and flourishing condition until July 1st of the year following planting for spring planted trees and September 1st of the year following planting for fall planted trees. This period may also be referred to as the Planting Warranty. Trees that are in good, healthy, and flourishing condition as determined by Parks Forestry at the end of the Guarantee Period will be granted Final Acceptance.

Replacements

Before the end of the Guarantee Period Parks Forestry will inspect the trees planted for the project to determine if they are in good, healthy, and flourishing condition. Any tree that is not free of dead branches and twigs, does not bear foliage of normal density, size, and color, and is determined by Parks Forestry to not meet the quality and condition requirements must either be pruned or replaced by the Contractor, as determined by Parks Forestry. No tree will be replaced prior to the end of the Guarantee Period unless authorized by Parks Forestry.

Parks Forestry will provide the Project Manager and Contractor with a list of trees that will need to be pruned or replaced per *Citywide Tree Planting Specifications*. The Contractor shall replace trees under warranty by June 30 for spring planted trees and November 15 for fall planted trees.



Planting via Parks Forestry Master Contract:

The Project Manager will work with Parks Forestry to coordinate tree planting along with other boulevard amenities including final grading, sod installation and hardscape.

Tree Planting Seasons

Trees are installed under the Parks Forestry Master Contract during these timeframes:

- Spring Planting Season: April 7 - June 15
- Fall Planting Season: October 1 - November 15

Sod Installation and Tree Planting

Trees should be installed following the final grade of boulevards, but prior to sod installation.

To coordinate tree planting with sod installation, the Project Manager, Contractor and Parks Forestry will need to be in close communication. The utility verification and marking process included in the *Citywide Tree Planting Specifications* is as follows:

- Parks Forestry will mark curbs with initial planting location
- The Planting Contractor must enter GSOC tickets a minimum of five (5) business days in advance of excavation
- The Planting Contractor must notify Parks Forestry that the submitted locates have been fully cleared for excavation a minimum of three (3) business days prior to planting
- Forestry will mark final planting location

Based on the above timeframes, Parks Forestry would need to be notified of a sod installation date at minimum fifteen (15) business days prior to proposed installation date to allow time for the Planting Contractor to complete any outstanding planting lists that have already been located and marked for planting, as well as time for the utility verification and marking process described above for the project itself. If this lead time is not possible, then planting may be postponed to the following season due to the sod establishment period.



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Establishment Phase

Following the guarantee period, Parks Forestry will inspect trees during the annual citywide tree survey. Any dead, dying or damaged trees identified during that survey will be marked for removal.

Parks Forestry will include all newly planted trees in the pruning cycle for that area following the guarantee period.

Project to fund tree watering for a two (2) year period following warranty expiration for all trees planted for the project to ensure long term survival. If funding is not available, Parks Forestry may not replace trees.

